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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,306	10/23/2001	Chi-Chan Chen	5198-3	1280

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EXAMINER

CHIN, CHRISTOPHER L

ART UNIT	PAPER NUMBER
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1641

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/045,306

Applicant(s)

CHEN ET AL.

Examiner

Christopher L. Chin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 6-9 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 is vague. While the claim recites formation of a chamber, the claim is vague in saying that the plate is "disposed on the microlocation" which suggests the plate being on the metallic film that forms that microlocation. In such an arrangement, a chamber cannot be formed.

Claim 8 is vague and indefinite. The recitation of "the surface facing the microlocation" lacks antecedent support.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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3. Claims 1, 4, 10, 12, and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Edman et al (US Patent 6,706,473) for the reasons of record in the previous office action.

In response to this rejection, Applicants argue that Edman uses a permeation layer on the face that is in contact with the solution unlike the instant invention which uses a metallic layer on the surface that receives the solution.

Applicant's argument has been considered but is not convincing. The claims rejected over Edman et al recite open "comprising" language and thus do not exclude a permeation layer on the metallic conductor layer of Edman et al.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edman et al (US Patent 6,706,473) in view of Mowles (US Patent 6,541,695) for the reasons of record in the previous office action.

In response to this rejection, Applicants argue that Mowles does not use a solution, nor subject a solution to an electrophoretic force. Applicants also argue that Mowles does not use an N-type silicon substrate. Applicants also point out that the gold,

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platinum, palladium, or titanium is not in contact with the substrate as in the instant invention. Mowles has an insulating layer and a back conductor in between the metal layer and the substrate.

Applicant's arguments have been considered but are not convincing. The instant claims fail to recite using a solution, subjecting a solution to an electrophoretic force, or using an N-type silicon substrate so it is not necessary for Mowles to provide such teachings. With respect to the position of the metallic layer relative to the substrate in Mowles, the instant claims do not recite any limitations that exclude the orientation of the metallic layer to the substrate set forth in Mowles. Furthermore, the open "comprising" language of the instant claims allows for the orientation of the metallic layer and substrate disclosed in Mowles.

6. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edman et al (US Patent 6,706,473) in view of Sosnowski et al (US Patent 6,518,022) and Attridge et al (US Patent 5,830,766) for the reasons of record in the previous office action.

In response to this rejection, Applicants argue that the metallic layer in Sosnowski et al is not in contact with the silicon base, which in any event is not a semiconductor substrate as required by the present invention.

Applicant's argument has been considered but is not convincing because the instant claims do not require the metallic layer be in direct contact with the substrate.

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7. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edman et al (US Patent 6,706,473) in view of Bogdanov (US Patent 6,245,507) for the reasons of record in the previous office action.

In response to this rejection, Applicants argue that Edman et al uses an optical fiber, without a lens between the microlocation and the light source, and Bogdanov teaches using a lens for exciting bonds in nucleic acid molecules.

Applicant's arguments have been considered but are not convincing. If Edman et al had taught the use of a lens with the optical fiber then claims 13-15 would have been included in the 102(e) rejection. Bogdanov teaches using a lens to focus light from a light source onto a specific location. The function of the focused light is immaterial. As would be desired in Edman et al, one would be motivated to incorporate a lens with the optical fiber for the advantage of being able to focus the light from the optical fiber to a specific microlocation.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Chin whose telephone number is (571) 272-0815. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher L. Chin
Primary Examiner
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5/2/05